A Discovery Operations Prototype

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The objective of the **Discovery Operations Prototype (POD)** is to provide a **working** prototype **of an integrated mission operations environment for NASA's future Discovery Class missions. A small group of mission analysts (1-10), using this environment, would be able to operate a mission from local or remote work.** stations **in the POD network.**

The **POD will provide all of the functionality necessary to conduct a** small **mission, including planning and analysis functions for science, spacecraft, and mission tasks. This includes tools for observation design, resource allocation, sequencing/commanding, navigation, spacecraft monitoring, product** distribution/archiving. The **environment will have the ability** to **acquire actual tracking and telemetry data** from the multimission operations **network, and will maintain a mission database.**

A Graphical User Interface provides access to new and existing mission operations **tools.** The **tools would be started, monitored, controlled and terminated from within the environment. The environment will also provide insight** and **automated guidance on the inter-tool activity flow. It will provide a means for alerting mission analysts of all conditions relevant to the status of the mission. Each group member will have access to all POD functions from a single workstation.**

7 he environment will be easily adaptable. An interactive mechanism will allow group members to customize the configuration of tools into activities that execute more complex tasks, such as the complete uplink process.

T he prototype will be tested and actually operated with real mission data and analysts for a period of one to two months, An existing mission will be selected, with **the prototype concentrating on a limited subset of that mission, (for example, one instrument during an orbital mapping phase). The scope of this** operations **demonstration will be representative of anticipated Discovery mission scenarios; results and follow-on demonstrations will be available to prospective Discovery Pls.**